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THIS ISSUE

Guidelines for Lumbar Fusion (Arthrodesis)

TO:

Clinics
Freestanding Surgery Centers
Freestanding Emergency Rms
Hospitals
Nurses
Panel Examiners
Physicians
Physicians Assistants
Self Insured Employers

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Purpose:

The purposes of this Provider Bulletin are: a) to inform providers that a revised edition of the department's Lumbar Fusion Guidelines becomes effective on July 1, 2001, b) to assist physicians with making the best clinical judgement when considering a lumbar fusion as a form of treatment for injured workers who present with symptoms resulting from a low back condition for which the department has accepted responsibility, and c) to provide nurses and physicians with clinical guidelines when making a recommendation for authorization or denial as part of the department's utilization review process.

These guidelines were developed and revised by the Washington State Department of Labor and Industries in collaboration with the Washington State Medical Association's Industrial Insurance and Rehabilitation Committee. These guidelines supersede those previously printed in Provider Bulletin 98-05, which was released in June 1998. Please replace the 1998 guidelines with the revised guidelines provided here. Also be sure to replace the 1998 lumbar fusion guidelines published in the 1999 issue of Office of the Medical Director Medical Treatment Guidelines. These revised guidelines may also be found at Labor & Industries' web site: www.lni.wa.gov/omd/pubs/dpubs.asp.

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Highlights of What Has Changed

- The format is new.
- The purpose of the guideline is expanded to consider utilization review.
- The definition of "Conservative Care" has been refined.
- The definition of "Instability" has been refined.
- Criteria have changed for evaluating a patient who has had a previous decompressive procedure at the same level.
- Criteria have been refined for evaluating a patient who has had a previous fusion at the same level
- Relative contraindications have been refined; Obesity is no longer listed.
- More precise instructions for follow-up care have been provided, and have been combined with a revised comment section.
- The "Lumbar Fusion Patient Information Form" has been improved.

There are no changes in the department's coverage or payment policies for lumbar fusions. All requests for lumbar fusions, whether for outpatient or inpatient settings, are subject to utilization review.

Guidelines for Lumbar Fusion (Arthrodesis)

I. The purpose of these guidelines are:

A. To serve as an instructional aid for physicians when treating injured workers who present with low back pain and associated symptoms that have developed in the context of routine work activity, and who have no evidence of spinal fracture.

B. To provide utilization review nurses with the information necessary to make recommendations about the medical necessity and clinical appropriateness of spinal fusions.

✓ **<u>Exception</u>: These guidelines do not apply to requests for fusion to treat patients with a spinal fracture or dislocation, spinal infection, or spinal deformity, (e.g. one related to degenerative scoliosis).**

II. Conservative care (consisting of all the following) should be tried first.

A. The patient should have had at least three months of conservative therapy for low back pain, which predominantly emphasizes physical reconditioning.

B. The surgeon requesting the lumbar fusion should have personally evaluated the patient on at least two occasions prior to requesting the fusion.

✓ **<u>Exception</u>: If the patient has a progressive neurological deficit, both A and B above can be waived.**

III. If conservative care has failed to relieve symptoms and the patient has had <u>no prior spinal surgery</u>, lumbar fusion should be considered only if the patient has one or more of the following:

A. Mechanical (non-radicular) low back pain with instability;

Instability of the lumbar segment is defined as at least 4mm of anterior/posterior translation at L3-4 and L4-5, or 5mm of translation at L5-S1 or 11 degrees greater end plate angular change at a single level, compared to an adjacent level. Adequate flexion/extension views should be taken utilizing techniques that minimize the potential contribution of hip motion to perceived lumbar flexion or extension.

✓ **<u>Note:</u> Only single level fusions will be approved for patients with no prior spinal surgery.**

B. Spondylolisthesis exists with one or more of the following:

1. Objective signs/symptoms of neurogenic claudication *<u>OR</u>*
2. Objective signs/symptoms of unilateral or bilateral radiculopathy, which are corroborated by neurologic examination and by MRI or CT (with or without myelography) *<u>OR</u>*
3. Instability of the lumbar segment as defined above in section III – A.

IV. If conservative care has failed to relieve symptoms and the patient has had a prior laminectomy, diskectomy, or other decompressive procedure at the same level, lumbar fusion should be considered only if the patient has one or more of the following:

A. Mechanical (non-radicular) low back pain with instability (as defined above in section III – A.) at the same or adjacent levels *OR*
B. Mechanical (non-radicular) low back pain with pseudospondylolisthesis, rotational deformity or other condition leading to a progressive (measurable) deformity *OR*
C. Objective signs/symptoms compatible with neurogenic claudication or lumbar radiculopathy that is supported by MRI or CT (with or without myelography) and by a detailed clinical neurological examination *OR*
D. Evidence from a post-laminectomy structural study of either:
    1. 100% loss of facet surface area unilaterally, *OR*
    2. 50% combined loss of facet surface area bilaterally

V. If conservative care has failed to relieve symptoms and the patient has had a prior fusion at the same level, lumbar fusion should be considered only if the patient has one or more of the following:

A. Pseudarthrosis with or without hardware failure, confirmed by objective evidence of pseudarthrosis (e.g. abnormal thin slice CT scan)
B. Neurogenic claudication supported by either MRI, CT, or myelography
C. Lumbar radiculopathy supported by either MRI, CT, or myelography, or supported by a detailed clinical neurological or neurosurgical examination.

VI. If conservative care has failed to relieve symptoms and the patient has had a prior fusion at a level adjacent to the new one being considered, lumbar fusion should be considered only if the patient meets the same criteria as described for patients with no prior history of spine surgery (see section III above).

VII. Contraindications for lumbar fusions, even when patients meet the criteria described in sections III, IV, V, and VI above.

A. Absolute contraindications
    1. Lumbar fusion is not indicated with an initial laminectomy/diskectomy related to unilateral compression of a lumbar nerve root.

B. Relative contraindications
    1. Severe physical de-conditioning
    2. Current smoking
    3. Multiple level degenerative disease of the lumbar spine
    4. Greater than 12 months of disability (time-loss compensation benefits) prior to consideration of fusion
    5. No evidence of functional recovery (return to work) for at least six months following the most recent spine surgery
    6. Psychosocial factors that are correlated with poor outcome, such as:
        a. History of drug or alcohol abuse
        b. High degrees of somatization on clinical or psychological evaluation
        c. Presence of a personality disorder or major psychiatric illness
        d. Current evidence of factitious disorder

VIII. When the physician wants to proceed with a lumbar fusion request:

A. The physician should be aware of the following research based findings*:

1. The chance of an injured worker no longer being disabled 2 years after lumbar fusion is only 32%.
2. More than 50% of workers who received lumbar fusion through the Washington workers' compensation program felt that both pain and functional recovery were no better or worse after lumbar fusion.
3. The overall rate of re-operation within 2 years for all fusions is approximately 23%.
4. Smoking at the time of fusion greatly increases the risk of pseudarthrosis.
5. Pain relief, even when present, is not likely to be complete.
6. The use of spine stabilization hardware (metal devices) in Washington workers nearly doubled the chances of having another surgery.

B. The operating surgeon should follow the lumbar fusion patient at least every two months for the first six postoperative months. At the six month examination, if the patient is still experiencing significant pain, a face to face evaluation should be conducted, which includes all of the following elements:

1. Neurologic examination
2. Thin slice CT to rule out pseudarthrosis
3. Repeat flexion-extension films to rule out instability (as defined in III- A.)

If new objective neurologic signs are absent, and if there is no objective evidence of fusion failure, the patient may have reached maximum medical improvement and an impairment rating (permanent partial disability (PPD) assessment) may be appropriate.

C. Prior to lumbar fusion, clinical psychological or psychiatric assessment should be performed on all patients who meet the lumbar fusion criteria and who have been receiving time-loss compensation benefits. This assessment is intended to help the requesting surgeon identify specific psychological risk factors for chronic disability that may be barriers to recovery following lumbar fusion.

D. All intraoperative determinations of instability that lead to fusion must be clearly documented at the time, and (if requested by L&I) subsequently discussed with a peer surgeon.

E. Although adding to the clinical database, provocative discography, diagnostic facet joint injections, and pain relief during the use of a rigid spinal brace are not definitive indications for fusion.

F. Anterior Lumbar Interbody Fusion (ALIF), if indicated, should be done only in conjunction with a posterior stabilization procedure.

✓ **<u>Note:</u> Prior to surgery, the physician should discuss with the patient, the information provided on the attached form (see next page). After discussing these details, both the physician and patient should sign at the bottom of the form. The form should be kept in the patient's medical records at the requesting surgeon's office.**

* Gary Franklin, MD, et. al., "Outcomes of Lumbar Fusion in Washington State Workers' **Compensation" SPINE** 1994, Vol 9, No. 17, pp. 1897 – 1903.

What You Should Know About Lumbar Fusion Surgery

Labor & Industries (the department) has created this information form so you will know how lumbar fusion surgery may affect your health and recovery. The department requires your doctor to discuss this information with you before the surgery in order to make the best decision possible. After you have read and discussed this information, both you and your doctor should sign your names at the end of this form. **This is NOT a surgical consent form**.

A study* conducted by Labor & Industries at the University of Washington showed that in Washington workers:

- About 2/3 of the workers who receive a lumbar fusion are still disabled two years after the surgery.
- More than half of the workers who received lumbar fusion felt that both their pain and ability to function were no better or worse after the surgery.
- Almost one quarter of the workers who had fusion surgery were operated on again within two years.
- Smoking at the time of fusion greatly increases the risk of failed fusion.
- The use of spine stabilization hardware (metal devices) in Washington workers nearly doubled the chances of having another surgery.
- Pain relief, even when present, is not likely to be complete.

In addition:

- Smoking at the time of fusion greatly increases the risk of fusion failure.
- Pain relief after fusion, even when it occurs, is not likely to be complete.

You should also know the department's expectations:
If the department approves your surgery, I will continue to see you at least every two months for six months after the surgery. If your fusion is successful (as defined in section VIII-B of the guidelines), I will consider you to be stable and will ask for an impairment rating to complete your care. If you continue to have pain after your surgery and I cannot find a medical reason for it, the department may not continue to pay for your medical care.

By signing this form, we (the *patient* and *physician*), attest that we have discussed the information presented here, we understand this information, and we wish to proceed with the fusion procedure. **We also understand that this information does NOT take the place of, and is separate and distinct from, the surgical consent form that we will review and sign prior to surgery.**

_____ _____

Patient Name Physician Name

Date: _____/_____/_____ Date: _____/_____/_____

* Gary Franklin, MD, et. al., "Outcomes of Lumbar Fusion in Washington State Workers' Compensation" SPINE 1994, Vol 9, No. 17, pp. 1897 – 1903.